

SPECIFICATION**TO ALL WHOM IT MAY CONCERN:**

5 Be it known that we, Charles F. Smiley, a citizen of the United States
of America, resident of Waunakee, county of Dane, state of Wisconsin, and
David S. Richman, a citizen of the United States of America, resident of
Racine, county of Racine, state of Wisconsin, have invented a new and useful
improvement in a

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SQUEEZE BOTTLE

which invention is fully set forth in the following specification.

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SQUEEZE BOTTLE

BACKGROUND OF THE INVENTION

5 The present invention relates generally to squeeze bottles. More particularly, the invention is directed to a squeeze bottle for containing and dispensing a viscous liquid such as food condiments and sauces.

10 It has been found that there are problems with the matching of caps and containers for squeeze bottles. There have also been problems with identifying the types of condiments or sauces contained in squeeze bottles that have been grouped together. Several attempts have been made to identify contents by using labels or markings. Small identification collars have also been used between containers and caps. These methods are faulty because the labels and markings fall off, wear off or become unreadable. In the case of the identification collars, there is no assurance that the cap and appropriate container become reunited after cleaning. These methods often result in additional cost and labor.

20 In some cases, such as with ketchup and mustard, the cap and the container have been colored opaque red and yellow, respectively. These types of bottles have failed to provide a system of coordination for the many other condiments and sauces that are now being used in addition to ketchup and mustard. Further, the opaque materials used for the containers of these types of squeeze bottles make it visually impossible to ascertain the amount of the condiment or sauce left in the container. This requires the operator to physically open the squeeze bottle or pick up the squeeze bottle to determine the amount. Accordingly, there is a need for a squeeze bottle that eliminates the above-identified problems. The present invention satisfies this need.

SUMMARY OF THE INVENTION

30 The present invention is directed to a squeeze bottle for containing and dispensing a viscous liquid such as a food condiment or sauce. The squeeze bottle includes a container constructed of a substantially transparent flexible plastic material. A container colorant is included in the flexible plastic material.

The squeeze bottle further includes a cap positioned on the container. The cap is constructed of a rigid plastic material. A cap colorant that matches the container colorant is included in the rigid plastic material. The cap has a tip to allow flow of the viscous liquid from the container through the cap.

The primary object of the present invention is to provide a squeeze bottle for containing and dispensing a viscous liquid that includes a container constructed of a substantially transparent colored flexible plastic material and a matching cap.

Other objects and advantages of the present invention shall become apparent to those skilled in the art upon a review of the following detailed description of the preferred embodiments and the accompanying drawings.

BRIEF DESCRIPTION OF THE DRAWINGS

Fig. 1 is a front elevational view of a squeeze bottle according to the present invention that includes the symbol for yellow;

Fig. 2 is a first side elevational view thereof;

Fig. 3 is a back elevational view thereof;

Fig. 4 is a second side elevational view thereof;

Fig. 5 is a top view thereof;

Fig. 6 is a bottom view thereof;

Fig. 7 is a second embodiment squeeze bottle according to the present invention that includes the symbol for red;

Fig. 8 is a third embodiment squeeze bottle according to the present invention that includes the symbol for green;

Fig. 9 is a fourth embodiment squeeze bottle according to the present invention that includes the symbol for brown; and

Fig. 10 is a detailed view of the container and the cap of a squeeze bottle according to the present invention.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

The preferred embodiments and best mode of the present invention will now be described in detail with reference being made to the drawings. The squeeze bottle according to the present invention is indicated generally
5 in the drawings by the reference number "10".

Referring to Figs. 1-6, the squeeze bottle 10 includes a container 12 having a cylindrical wall 14 that extends longitudinally along an axis A-A, a base 16 and a top 18. The container 12 is constructed of a transparent flexible plastic material that includes a container colorant at a predetermined
10 ratio with respect to the flexible plastic material. The term "transparent" as used herein is defined as the ability to see through an object.

In a preferred embodiment, the flexible plastic material of the container 12 is a clarified low-density polyethylene (LDPE). It has been found that LDPE provides the necessary flexibility to allow the container 12
15 to be squeezed while allowing it to retract to its original position. This material is also important because it allows the container 12 to be transparent.

As shown in Figs. 1-6, a container colorant such as a yellow pigment is included in the flexible plastic material at a predetermined ratio with
20 respect to the flexible plastic material. In a preferred embodiment, the predetermined ratio is in a range from about 1% to about 4%, by volume, of the container colorant to the flexible plastic material. It has been found that this predetermined ratio allows the plastic material of the container 12 to be transparent while allowing the plastic material to have a yellow color, tint or
25 tone.

As shown in Fig. 1, the cylindrical wall 14 includes volumetric indicia
20 in both standard and metric units of measurement. The container 12 can be a variety of shapes and sizes. In the embodiment shown in Fig. 1, the container 12 has a 24-ounce capacity.

30 As shown in Figs. 1-4, the wall 14 of the container 12 includes one or more gripping members 22. In a preferred embodiment, each side of the container 12 includes five gripping members 22 that are opposed to one

another. The gripping members 22 allow the container 12 to be firmly held by the operator.

Referring to Figs. 1-5 and 10, the squeeze bottle 10 includes a cap 30 positioned on the container 12. As shown in Fig. 10, the top 18 of the container 12 includes a cylindrical neck 32 that extends along axis A-A. The neck 32 has an exterior surface 34 that includes threads 36. The neck 32 includes a neck opening 38 that provides an opening to the interior 40 of the container 12. The cap 30 includes threads 42 that are sized and adapted to mate with the threads 36 of the neck 32. As it will be appreciated, this allows the cap 30 to be attached to the neck 32. As shown in Fig. 1, the cap 30 includes one or more friction members 44 to allow an operator to firmly grasp the cap 30.

Still referring to Figs. 1 and 10, the cap 30 includes a conically shaped tip 46 that extends longitudinally along axis A-A. The tip 46 includes one or more guides 48 for cutting the tip to create an opening. The guides 48 can be used to create either a small opening near the top of the tip 46 or a large opening near the bottom of the tip due to the conical shape of the tip. Other openings can be made between the top and the bottom of the tip 46. In an alternate embodiment, the tip 46 can be precut at the place of manufacture.

As shown in Fig. 1, the cap 30 is constructed of a rigid plastic material that includes a cap colorant that matches the container colorant. In a preferred embodiment, the rigid plastic material is an opaque high-density polyethylene (HDPE). It has been found that HDPE is suitable because it is durable and long lasting.

Referring to Figs. 1-6, the cap 30 includes a cap colorant such as a yellow pigment to match the container colorant of the container 12. In this embodiment, the squeeze bottle 10 as shown in Figs. 1-6 is particularly applicable to contain and dispense mustard. An operator would quickly and easily recognize the yellow-colored container 12 and the matching cap 30 as a squeeze bottle for mustard. An operator would also be able to readily determine the amount of mustard in the transparent container 12. The tip

46 of the cap 30 can be cut to allow a desired flow of mustard from the container 12 through the tip 46. When the squeeze bottle 10 is cleaned, the container 12 can be easily and quickly matched with the cap 30 having the desired opening in the tip 46. In addition to the functional features, the
5 squeeze bottle 10 has a pleasing aesthetic appearance.

Referring to Fig. 7, a second embodiment squeeze bottle 10 is shown. In this embodiment, the container colorant of the container 12 and the cap colorant of the cap 30 are red pigments. This allows the second embodiment to be particularly applicable for use with ketchup.

10 A third embodiment squeeze bottle 10 is shown in Fig. 8. In this embodiment, the container colorant of the container 12 and the cap colorant of the cap 30 are green pigments. The third embodiment is particularly applicable for use with relish.

15 A fourth embodiment squeeze bottle 10 is shown in Fig. 9. In this embodiment, the container colorant of the container 12 and the cap colorant of the cap 30 are brown pigments. The fourth embodiment squeeze bottle 10 is particularly applicable for use with barbeque sauce.

It should be understood that a squeeze bottle 10 according to the present invention can include a wide variety of container and cap colorants.
20 Accordingly, the colorants are not limited to the four colorants described above.

The above detailed description of the present invention is given for explanatory purposes. It will be apparent to those skilled in the art that numerous changes and modifications can be made without departing from
25 the scope of the invention. Accordingly, the whole of the foregoing description is to be construed in an illustrative and not a limitative sense, the scope of the invention being defined solely by the appended claims.